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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,283	09/12/2003	Scott C. Blanchet	B429-073	7622

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EXAMINER
HODGE, ROBERT W

ART UNIT	PAPER NUMBER
1745	

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/661,283	BLANCHET ET AL.	
	Examiner	Art Unit	
	Robert Hodge	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,6,8,9,12-37,40,42-54 and 56-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,6,8,9,12-37,40,42-54 and 56-62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/5/06 has been entered.

2. The Examiner notes that the amended claims are not fully compliant because the designation for claim 62 states that claim 62 was previously presented. However claim 62 depends on claim 61 and claim 61 is designated as being a new claim. Also in applicants' remarks, first full paragraph applicants state that claim 61 and 62 have been added. Therefore the Examiner assumes that the designation of claim 62 is a typo and should read that claim 62 is a new claim and for purposes of furthering prosecution claim 62 will be designated as a new claim.

Response to Arguments

3. Applicant's arguments, see Remark/Arguments, filed 6/5/06, with respect to the rejection(s) of claim(s) 1 and 6-8 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. 6,070,911.

4. Applicant's arguments with respect to the Namikawa reference have been fully considered but they are not persuasive because they are not commensurate with the scope of the claims. Applicants state that the Namikawa reference does not teach that any and all parts may be coated, that the material is polished or the use of insulating material on the surfaces of the through openings. This is not found persuasive because applicant have not recited anywhere in any of the claims the degree to which any or all of the part will be coated. Applicants first state that the coating is present starting at a location adjacent a first surface and ending at a preselected distance. Said limitation is so broad and can mean so many different things, such as nanoscopic. Later applicants say that the entire first surface is coated, the use of the word entire does not mean the complete exposed surface is coated, the use of the word entire only means that the predetermined area as first described is entirely coated. It would also be within the level of skill of a person having ordinary skill in the art that if say for example 5 parts of 6 total parts needed to be coated, that all 6 parts could be coated. It would also stand to reason that if say for example spray coating were used that overspray would occur and every part would have some sort of overspray, which is a coating in and of itself. Also if dip coating were used then everything would be coated. Applicants do not recite the type of coating process used, nor would said process limitation add any patentable subject matter to the apparatus claims of the present invention because it would be considered a Product-by-process limitation. As to the polishing limitation, the Examiner reads said limitation as a Product-by-process limitation. Further applicants again do not recite any sort of degree as to the level of polishing. If applicants can show that they

have unexpected results for this polishing then applicants are encouraged to do so through an affidavit. The Examiner also notes that by assembling parts that have been coated a certain degree of polishing can be expected just by the parts rubbing up against one another, also just by the person assembling the connection assembly will some sort of polishing occur just from handling the apparatus. As to the insulating material, this limitation has been addressed in previous office actions and has been the discussion in interviews and will therefore not be further discussed. Therefore it is the Examiner's position that the Namikawa reference still reads on the claims as so recited and the rejections will be maintained in view of said reference.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 3, 6, 8, 9, 12-18, 20 and 22-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pre-Grant Publication No. 2001/0040349 hereinafter Carr in view of U.S. Patent No. 6,070,911 hereinafter Namikawa.

7. Carr teaches a connection assembly for connecting two components that utilizes a dielectric member situated between two members of the two components, that is disk shaped and has an opening that is smaller than the opening of the two members and an

outer portion that extends outward of the two members and utilizes a raised sealing face (abstract, figures 1 and 5, paragraphs [0002] – [0045]).

8. Carr does not teach any of the specific properties of the connection assembly.

9. Namikawa teaches a connection assembly for connecting two pipes that are at different electrical potentials by using dielectric materials sandwiched in between two plates or flanges that are weldable, using bolts and or substantially v-shaped clamps to hold the two members together, using dielectric members that have smaller openings than that of the bolt holes, and that dielectric tubes are used around the bolts, and that said bolts also have nuts and washers used in the assembly that also comprise metal, dielectric washers (i.e. a disk-shaped dielectric member) and non-dielectric washers. Namikawa also teaches that parts used in the assembly may be coated with a dielectric material that is of a mica material and/or a ceramic coating (abstract, figures 1-5, column 1 lines 6-54 and column 2 line 11 – column 4, line 59).

10. At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the features of the Namikawa reference in the Carr reference in order to provide a connection assembly that decreases flow resistance and is also electrically isolated that would in turn prevent any explosions should explosive gases be transported in the pipes. It would have also been obvious to a person having ordinary skill in the art to coat any or all of the parts of the connection assembly to best isolate the two pipes from one another to create the best electrical isolation from the two pipes again to prevent the ignition of any explosive gases from either static or electrical discharge.

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Namikawa as applied to claims 1, 3, 6, 8, 9, 12-18, 20 and 22-36 and further in view of U.S. Patent No. 5,967,566 hereinafter Schlicht.

12. Carr and Namikawa do not teach the use of an ASME slip-on flange.

13. Schlicht teaches a lightweight slip on pipe flange that is a conventional ASME flange (column 1, lines 52-63 and column 3, lines 51-64).

14. At the time of the invention it would have been obvious to a person of ordinary skill in the art to include a conventional ASME flange in the Carr and Namikawa references as taught by Schlicht in order to use a well known and recognized slip-on flange that is easily attainable and would allow for easy assembly of the connector.

15. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Namikawa as applied to claims 1, 3, 6, 8, 9, 12-18, 20 and 22-36 and further in view of U.S. Pre-grant publication No. 2004/0137259 hereinafter Pabla.

16. Carr and Namikawa do not teach the use of NiCrAlY and Al_2O_3 as the dielectric materials to be used in the coatings.

17. Pabla teaches that NiCrAlY and Al_2O_3 are well known for their dielectric properties and are especially desirable in dielectric coatings (paragraphs [0008], [0014], [0022], [0033], and tables III and IV).

18. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use NiCrAlY and Al_2O_3 as the dielectric materials in the Namikawa and Carr references as taught by Pabla in order to use well known dielectric materials that

would provide an electrically insulative coating that would be durable and easily attainable for manufacturing purposes.

19. Claims 37, 40, 42-51, 53, 56 and 58-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Namikawa as applied to claims 1, 3, 6, 8, 9, 12-18, 20 and 22-36 and further in view of Energy Partners.

20. Carr and Namikawa do not teach the use of the connection assembly with a fuel cell stack.

21. As discussed in a prior office action Energy Partners released an article on June 11, 1999 disclosing a 20 kW fuel cell stack called the NG2000. Further research reveals a picture of the NG2000 that has connectors mounted to it that use an industry standard butt weld sanitary ferrule connectors that are commercially available. As can be seen in the picture it is clearly a fuel cell stack assembly having more than one sanitary ferrule connector.

22. At the time of the invention it would have been obvious to a person of ordinary skill in the art that the connection assembly taught by Carr and Namikawa could also be use in the Energy Partners fuel cell stack in order to electrically isolate the stack from the fuel source especially at high operating pressures in order to reduce the risk of a potential explosion due to the extreme combustibility of gases used in fuel cell stacks.

23. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Namikawa and Energy Partners as applied to claims 1, 3, 6, 8, 9, 12-18, 20, 22-37, 40, 42-51, 53, 56 and 58-62 and further in view of Schlicht.

24. Carr, Namikawa and Energy Partner do not teach the use of an ASME slip-on flange.

25. Schlicht teaches a lightweight slip on pipe flange that is a conventional ASME flange (column 1, lines 52-63 and column 3, lines 51-64).

26. At the time of the invention it would have been obvious to a person of ordinary skill in the art to include a conventional ASME flange in the Carr and Namikawa references as taught by Schlicht in order to use a well known and recognized slip-on flange that is easily attainable and would allow for easy assembly of the connector.

27. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Namikawa and Energy Partners as applied to claims 1, 3, 6, 8, 9, 12-18, 20, 22-37, 40, 42-51, 53, 56 and 58-62 and further in view of Pabla.

28. Carr, Namikawa and Energy Partner do not teach the use of NiCrAlY and Al_2O_3 as the dielectric materials to be used in the coatings.

29. Pabla teaches that NiCrAlY and Al_2O_3 are well known for their dielectric properties and are especially desirable in dielectric coatings (paragraphs [0008], [0014], [0022], [0033], and tables III and IV).

30. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use NiCrAlY and Al_2O_3 as the dielectric materials in the Carr and Namikawa references as taught by Pabla in order to use well known dielectric materials that would provide an electrically insulative coating that would be durable and easily attainable for manufacturing purposes.

31. Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Namikawa and Energy Partners as applied to claims 1, 3, 6, 8, 9, 12-18, 20, 22-37, 40, 42-51, 53, 56 and 58-62 and further in view of Guthrie et al. U.S. Patent No. 4,786,086 hereinafter referred to as Guthrie et al.

32. Carr, Namikawa and Energy Partner do not disclose that the fuel cell stack assembly be enclosed in a vessel with a pipe extending through said vessel.

33. Guthrie et al. teaches that a fuel cell stack operated at high pressures must be contained in a pressure vessel (column 1, lines 20-22) and that pipes will penetrate the stack pressure vessel (column 3, lines 25-26).

34. At the time of the invention it would have been obvious to a person of ordinary skill in the art to enclose a high-pressure fuel cell stack within a pressure vessel. The motivation for doing so would have been first to maintain the fuel cell stack at the desired pressure for operation without the loss of gases from leaks between the cells due to the pressure differential between the stack and the atmosphere. As well as to contain the fuel cell stack for safety purposes if a component were to explode due to the high operating pressure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Hodge whose telephone number is (571) 272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RWH

PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER